



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/626,024	07/24/2003	Tetsuo Tsutsui	0553-0373	9956

7590 03/16/2005

COOK, ALEX, McFARRON, MANZO,
CUMMINGS & MEHLER, LTD.
SUITE 2850
200 WEST ADAMS STREET
CHICAGO, IL 60606

EXAMINER

SANTIAGO, MARICELI

ART UNIT	PAPER NUMBER
----------	--------------

2879

DATE MAILED: 03/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

14A

Office Action Summary	Application No.	Applicant(s)	
	10/626,024	TSUTSUI, TETSUO	
	Examiner	Art Unit	
	Mariceli Santiago	2879	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____, is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4-9,11,12 and 14 is/are rejected.
- 7) ☒ Claim(s) 2,3,10 and 13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

The information disclosure statement filed July 24, 2003 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 7, 11 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Okai et al. (JP 2002-033193).

Regarding claim 1, Okai discloses an organic electroluminescent device comprising a first electrode (111), a second electrode (112), and an electroluminescent layer (101) between the first electrode and the second electrode, the electroluminescent layer containing an organic compound that emits light by an application of a voltage, wherein conductive particles are dispersed in the electroluminescent layer (carbon nanotubes, Paragraphs [0005-0006]).

Regarding claim 7, Okai discloses an organic electroluminescent device wherein the conductive particles contain a material having conductivity equal to or greater than 10^{-10} S/m (the material used for the conductive particles inherently have the claimed conductivity).

Art Unit: 2879

Regarding claim 11, Okai discloses an organic electroluminescent device wherein the conductive particles comprise inorganic semiconductor particles having an average diameter between 2 and 50 nm (30 nm, Paragraph [0008]).

Regarding claim 14, Okai discloses an organic electroluminescent device wherein the conductive particles comprise at least one selected from the group consisting of carbon particles, carbon particles that have undergone a surface treatment by use of a surfactant, carbon nanotubes, and fullerenes (carbon nanotubes, Paragraphs [0005-0006]).

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 4-9, 11 and 12 are rejected under 35 U.S.C. 102(e) as being anticipated by Marrocco, III et al. (US 2002/0028347).

Regarding claim 1, Marrocco discloses an organic electroluminescent device comprising a first electrode (12), a second electrode (20), and an electroluminescent layer (18) between the first electrode and the second electrode, the electroluminescent layer containing an organic compound that emits light by an application of a voltage, wherein conductive particles are dispersed in the electroluminescent layer (Paragraph [0032]).

Regarding claim 4, Marrocco discloses an organic electroluminescent device wherein the electroluminescent layer comprises a bipolar characteristics (Paragraphs [0063-0064]).

Regarding claim 5, Marrocco discloses an organic electroluminescent device wherein the electroluminescent layer comprises a bipolar mixed layer in which an organic compound having an electron transporting characteristics and an organic compound having a hole transporting characteristics are mixed (Paragraphs [0063-0064]).

Regarding claim 6, Marrocco discloses an organic electroluminescent device wherein the electroluminescent layer contains a polymeric compound having at least one of a π -conjugate system and a σ -conjugate system (Paragraph [0044]) and having bipolar characteristics (Paragraphs [0063-0064]).

Regarding claim 7, Marrocco discloses an organic electroluminescent device wherein the conductive particles contain a material having a conductivity equal to or greater than 10^{-10} S/m (claim 17 discloses the material used for the conductive particles, such materials inherently have the claimed conductivity).

Regarding claim 8, Marrocco discloses an organic electroluminescent device wherein the conductive particles comprise metal particles having an average diameter between 2 and 50 nm (Paragraph [0032]).

Regarding claim 9, Marrocco discloses an organic electroluminescent device wherein the metal particles comprise at least one selected from the group consisting of gold, silver, and platinum (claim 17).

Regarding claim 11, Marrocco discloses an organic electroluminescent device wherein the conductive particles comprise inorganic semiconductor particles having an average diameter between 2 and 50 nm (Paragraph [0032]).

Regarding claim 12, Marrocco discloses an organic electroluminescent device wherein the inorganic semiconductor particles comprise at least one selected from the group consisting of cadmium sulfide, selenium sulfide, zinc oxide, zinc sulfide, copper iodide, and an indium tin oxide (Paragraph [0032]).

Other Prior Art Cited

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Allowable Subject Matter

Claims 2, 3, 10 and 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 2, the references of the Prior Art of record fails to teach or suggest the combination of the limitations as set forth in claim 2, and specifically comprising the limitation of an insulating layer disposed between the first electrode and the electroluminescent layer for preventing a carrier injection from the first electrode to the electroluminescent layer, and an insulating layer disposed between the second electrode and the electroluminescent layer for preventing a carrier injection from the second electrode to the electroluminescent layer

Regarding claim 3, the references of the Prior Art of record fails to teach or suggest the combination of the limitations as set forth in claim 3, and specifically comprising the limitation of an insulating layer disposed between the first electrode and the electroluminescent layer, and an insulating layer disposed between the second electrode and the electroluminescent layer, wherein the organic electroluminescent device is operated by an alternating current bias.

Regarding claims 10 and 13, the references of the Prior Art of record fails to teach or suggest the combination of the limitations as set forth in claims 10 and 13, and specifically comprising the limitation of the particles being covered with an organic compound.

Art Unit: 2879

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mariceli Santiago whose telephone number is (571) 272-2464. The examiner can normally be reached on Monday-Friday from 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel, can be reached on (571) 272-2457. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Mariceli Santiago
Patent Examiner
Art Unit 2879